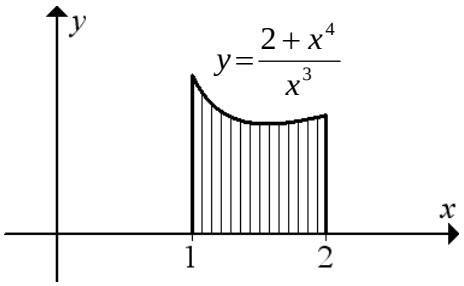
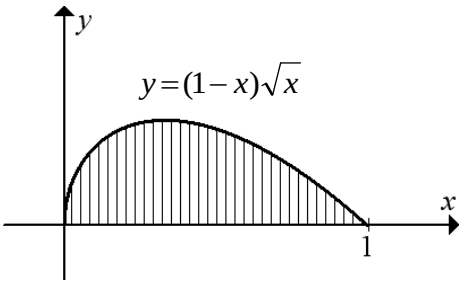
Terceira Lista de Exercícios − Matemática II / Contábeis − Prof. Luiz Felipe − 2016 / 1º

1) Encontre a área das regiões indicadas:

a)



b)



2) Esboce a região indicada e calcule sua área:

a) Região entre o eixo x e a parábola $y = x^2$, de $x = -1$ até $x = 2$.

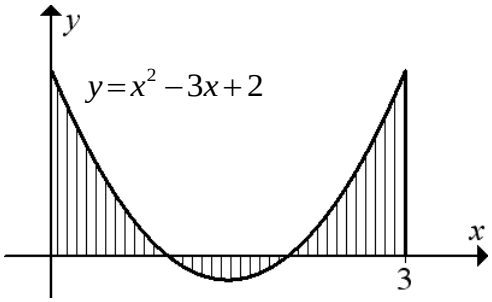
b) Região entre o eixo x e a parábola $y = -x^2 + 4x - 3$, de $x = 2$ até $x = 3$.

3) Calcule:

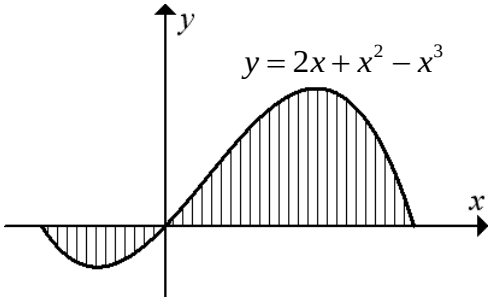
a) $\int_0^3 \frac{3}{\sqrt{3+2t}}\,dt$ b) $\int_2^3 \frac{s}{(s-1)^3}\,ds$ c) $\int_1^2 x^2\sqrt{x-1}\,dx$.

4) Encontre a área das regiões indicadas:

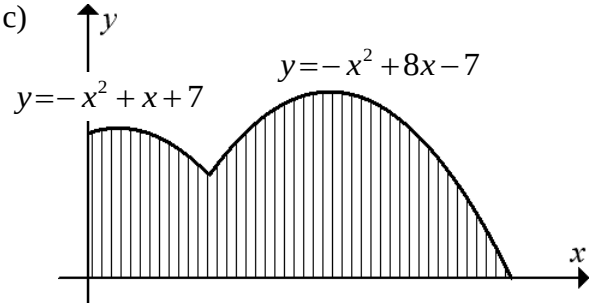
a)



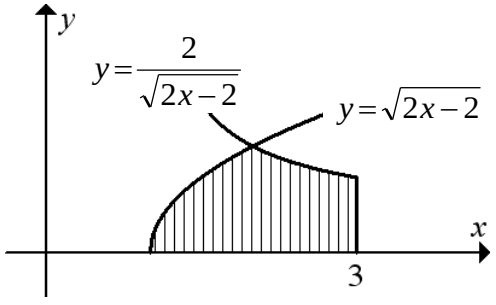
b)



c)



d)

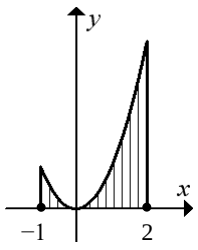


Respostas.

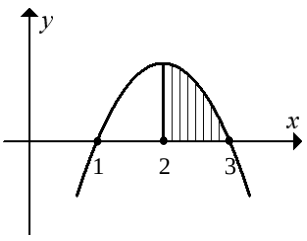
1) a) $\frac{9}{4}$ b) $\frac{4}{15}$ 2) a) 3 b) $\frac{2}{3}$.

3) a) $9-3\sqrt{3}$ b) $\frac{7}{8}$ c) $\frac{2}{7}+\frac{4}{5}+\frac{2}{3}=\frac{184}{105}$.

4) a) $\frac{11}{6}$ b) $\frac{37}{12}$ c) $\frac{140}{3}$ d) $\frac{\sqrt{8}}{3}+\left(4-2\sqrt{2}\right)=\frac{12-4\sqrt{2}}{3}$.



Questão 2a



Questão 2b